James L. Jones, Ph.D.
Consulting Scientist

Work at INEEL:
Dr. Jones joined INEEL in 1981 and has specialized in the development of electron and charge particle accelerator technologies and advanced sensors for nondestructive evaluation, medical therapy, and especially nuclear nonproliferation applications. In addition to his recent work as co-inventor of the Change Detection System (CDS) technology, Dr. Jones is currently developing: 1) an electron accelerator-based system for the detection of Highly Enriched Uranium within shielded enclosures, and 2) a gamma-ray spectroscopy system capable of integrating directly with pulsed X-ray radiography applications.

Dr. Jones is a recognized expert in photonuclear measurement techniques, has participated in several Department of Energy advisory groups, and has successfully collaborated with private industry and other national laboratories in numerous unique applications. He was awarded the George Westinghouse Innovation Award in 1993. He is also a member of numerous scientific organizations, including the American Physical Society (APS) since 1988, the Idaho Section American Nuclear Society (IANS) since 1985, the American Nuclear Society (ANS), Sigma Xi (Honorary Scientific Research Society), Tau Beta Pi (National Engineering Honor Society), Pi Tau Sigma (Mechanical Engineering Honor Society), Alpha Nu Sigma (Nuclear Science and Engineering Honor Society).

Dr. Jones also holds a dual appointment at Idaho State University, where he is currently an adjunct faculty member in the College of Engineering and an associate faculty member in the Department of Physics. Currently, Dr. Jones is also the Associate Director of the Idaho Accelerator Center at the Idaho State University.

Education:
Dr. Jones earned a B.S. in mechanical engineering from the University of Texas, Austin in 1979. He completed an M.S. in nuclear engineering from the Massachusetts Institute of Technology in 1980. He took graduate courses at the University of California, Los Angeles, Cornell University, Lawrence Livermore National Laboratory, Argon National Laboratory and the Stanford Linear Accelerator Center. Dr. Jones earned a Ph.D. in nuclear science and engineering from Idaho State University in 1996.

Patents/Publications:
In addition to his role in the patent-pending CDS technology, Dr. Jones is co-inventor on three patents. He is author or co-author of 15 journal articles, 20 published conference presentations, and numerous formal and informal reports and unpublished conference presentations.